Accelerant Detection

Canine Team

Gerry Bartlett & K9 Cinder

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Overview

History of Accelerant Detection Canines

The use of Accelerant Detection Canines (ADC) dates back to 1985 to a joint project between the Bureau of Alcohol Tobacco and Firearms (ATF), Connecticut State Police and the Connecticut State Crime Lab. This project led to the first North American ADC, Maddie, being deployed in 1986. Since that time many other agencies, having seen the value of this type of detection dog, have instituted programs of their own. Accelerant Detection Canines are working throughout Canada, the United States, Europe, Asia, and South America.

It has been shown that the use of Accelerant Detection Canines for the purpose of improving the investigation of fires and particularly in the collection of samples for laboratory analysis is invaluable to forensic fire and explosion investigators. Samples of fire debris collected as the result of a properly trained and maintained ADC have a high probability of being confirmed as positive for ignitable liquids when submitted to the laboratory for testing. Given the cost of testing each sample can be $400.00 +, it is imperative to submit samples you can be confident about, having already been identified by an Accelerant Detection Canine.

Fire Investigators, Forensic Scientists, and other professionals involved in the investigation of fires and explosions recognize the benefit of having a trained Accelerant Detection Canine assist in scene examination. The ADC will provide assistance to the investigator through its multiple uses and the increase in confirmed hits in the laboratory. This points to the exceptional value of having an ADC as part of your investigative team.

This Team is composed of Gerry Bartlett and K-9 Cinder. Mr. Bartlett has worked as a Police Officer with the Hamilton Police Service (16 yrs), a Fire and Explosion Investigator with Ontario’s Office of the Fire Marshal (8 yrs), and a Canine Trainer, Handler and Behaviour Consultant (10 yrs). As well as being a member of the Canine Accelerant Detection Association and sitting on its Board of Directors, Mr. Bartlett is also a member of the National Association of Professional Canine Handlers, and the Canadian Association of Fire Investigators. Cinder is a five-year-old Canadian Kennel Club Registered Flatcoated Retriever. She is currently trained on over 15 volatile ignitable liquids. Together this team is certified by both the Canine Accelerant Detection Association (CADA) and the National Association of Professional Canine Handlers (NAPCH).
Established in 1991, CADA is the oldest national and international association dedicated solely to detection canines working in the field of fire investigations.

**CADA Mission Statement:** CADA is an open organization dedicated to maintaining the highest standards of professional handlers in the field of accelerant detection canines. Its aim is to provide support for all involved in education, health, and training of our canine partners while providing guidelines to promote professionalism, integrity, and the standards it represents.

The National Association of Professional Canine Handlers was established in 2005 with a mandate to “ensure excellence among police and private canine teams for the security and well-being of society”.

**Goals**

1. To provide independent Origin and Cause Investigators and Insurance Agencies with a Certified Accelerant Detection Canine Team to assist in the investigation of fires and explosions.
2. To deploy an accelerant detection canine in areas where it can be most effectively utilized and integrated with the requirements of Origin and Cause Investigators, Insurance Agencies as well as the public sector.

**Value of This Program**

As you will see in the details of this proposal, the users of this program have limited financial exposure in order to procure an internationally recognized and valued resource.
**Accelerant Detection Canine Uses**

In addition to searching fire and explosion scenes and the surrounding area for evidence, ADC can also be used to proof the investigator's tools prior to, or following scene excavation, searching seized exhibit containers to ensure a positive sample has been collected for laboratory analysis, and to search a suspect's clothing and/or vehicle (where Statute permits). The versatility and usefulness of dogs is in their ability to search a scene in ways previously unavailable to the investigator. With their seek/hunt drive, they are useful for searching both the interiors and exteriors of structures. Their size, agility and endurance make them particularly advantageous in collapsed structure fires where the liquid accelerant residue could be buried, by providing access to areas not available to human searchers. This serves to assist the investigator in conducting a thorough scene examination.

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With laboratory costs for GC-MS analysis of fire debris in the range of $400 + per sample, it is imperative that the investigator submit samples they can be confident will reveal the presence of a volatile ignitable liquid, should one be present at the scene. Random sampling from a fire scene and the submission of several evidence containers for analysis can result in thousands of unnecessary dollars being spent in laboratory costs. An **Accelerant Detection Canine** can pinpoint the areas to select samples drastically reducing the number submitted and thereby drastically reducing time and costs.

**Canine Detection vs Electronic Detectors**

In lieu of **Accelerant Detection Canines**, some investigative agencies have opted to use electronic hydrocarbon detectors, commonly referred to as “sniffers”. These detectors were originally designed to detect leaks in gas lines where the fuel is under pressure. **They were not designed as an investigative tool** to be used in forensic fire scene examinations and though they can be utilized to locate volatile ignitable liquids (VIL) and their residues, they are extremely limited in this capacity. Despite adaptations to the equipment, these detectors have shown they cannot discriminate between VIL residues and pyrolysis products (fire debris). Electronic detectors have a **high percentage of false positives** and calibration and maintenance issues keep them out of service for extended periods of time. In addition, these detectors cannot work from initial vapour recognition to source. They are **unable to pinpoint** the highest concentration and source of the vapour where a sample of fire debris can be taken for laboratory analysis (*Furton and Harper*, 2004; *Furton and Myers*, 2001).
DO THE DOG MATH:

OVER 220 MILLION SCENT RECEPTORS
+ 70% BRAIN CAPACITY DEDICATED TO THE OLFACTORY SYSTEM
+ 800 TYPES OF SCENT RECEPTORS
+ 300 INHALATIONS PER MINUTE WHILE SEARCHING
+ 1 NEURON LINKING THE SCENT RECEPTORS DIRECTLY TO THE BRAIN

= 1 SUPERIOR DETECTION TOOL

A trained canine can respond to an accelerant odour with greater sensitivity than current mechanical field accelerant detection devices. Research has shown that a canine's olfactory and discriminatory capabilities are more sensitive than the standard electronic detectors used by fire investigators. An ADC provides a more effective detection system than mechanized field detection instruments. The fire investigator requires a detection system that differentiates between products of pyrolysis and true accelerants. A properly trained and maintained Accelerant Detection Canine offers this capability.

“Compared to ‘sniffers’ and humans, dogs assist by more accurate sample collection and better use of laboratory time. With properly trained and properly maintained dogs an alerted sample has a higher probability of containing an ignitable (liquid) accelerant than samples collected by human efforts alone.” (Gialamas, 1995)

Evaluation Requirements

- The Handler/Canine Team will maintain yearly certification through the CADA and bi-annual certification with NAPCH.
- Maintenance training will continue at a minimum of sixteen (16) hours per month, and include objective based training to work on any deficiencies.
● Evaluations of the canine/handler team will be conducted on a quarterly basis.
● It shall be the goal of this Team to have 95% of all samples collected as a result of the K9’s alerts be confirmed by laboratory analysis.

**Costs and Responsibilities**

1. The handler will offer the services of the ADC Team to Origin and Cause Investigators and Insurance Agencies to attend fire and explosion investigations upon request. This service will be offered at a cost of:
   a. Mileage at a rate of $0.62* per kilometer.
   b. An hourly rate of $105.00* for on scene time. An hourly rate of $27.50* for preparing the canine and equipment, travel time and decontamination of the canine and equipment. There is no GST.
   c. Meals and accommodation including taxes, in the unlikely event they will be required, for the handler and canine supported by receipts.

   NOTE: It is recognized that some scenes may require the canine/handler team to attend on more than one occasion. This shall be agreed upon by the handler and the requesting agency.

2. The handler reserves the right to decline a request for service if unavailable.

3. The handler reserves the right, upon attending the scene, to decline to enter the scene in regards to any safety concerns for the handler and/or canine. If this occurs the requesting agency agrees to pay for all costs incurred as stipulated in Section 1 above. It is understood that the handler and requesting agency shall communicate prior to attending the scene and review all safety concerns in detail and whether the attendance of the Team will be prudent or offer any assistance to the investigator. At that time, should the handler decline to attend, no consultation fees will be charged.

4. The handler agrees the Canine/Handler Team will maintain current certification from the Canine Accelerant Detection Association and the National Association of Professional Canine Handlers, and to abide by CADA’s Standard for Accelerant Detection Canine Team.

5. The handler shall provide a written report to the requesting agency for any deployment of the canine/handler team as well as a detailed invoice for costs incurred. The cost of this report shall be $125.00.* No hourly fee will be charged for the production of this report.
6. The handler agrees to maintain complete and accurate training records. These will include records showing the canine’s reliability in terms of number of alerts and those confirmed by laboratory analysis.

7. The requesting agency shall supply the handler, upon their receipt, a copy of laboratory reports as they pertain to samples collected as a result of the K9’s alert.

8. Attempts will be made to notify the handler of fires/explosions being investigated by your agency where the attendance of the Canine/Handler Team is NOT required, but the handler may choose to attend for training purposes. This will be done with NO costs submitted to the notifying agency.

*rates in effect until 31 December, 2018

I sincerely hope the preceding information has been of assistance in recognizing the value of this program and in determining your needs with respect to the use of an Accelerant Detection K9 as part of your Origin and Cause Investigative Team.

Please feel free to contact me at any time to answer your questions.

Respectfully Yours;

Gerry Bartlett
K9 Trainer/Handler

“Detector dogs still represent the fastest, most versatile, reliable and cost effective real-time detection devices available.”

(Furton and Myers, 2001)